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The touch of sound: Dalcroze Eurhythmics as a somatic practice

ABSTRACT

Dalcroze Eurhythmics is a rich and multifaceted, living practice that has developed a wide range of applications and pedagogical approaches during more than a century of endeavour. Most researchers have situated this work within music education, dance and theatre history and therapy of various kinds. In this article we argue that it may also be considered a somatic practice owing to the ways in which movement, space, sensation, presence, touch and improvisation are central to the method. While recognizing that not all somatic practices include touch and improvisation, we focus on these aspects to explore the notion of the haptic nature of vision and sound, as they are manifest in the Dalcroze class. Drawing on practical examples of widespread practice within the Dalcroze community as well as personal experiences, we assert that the touch-like nature of sound not only makes contact with the body, inciting physical and emotional movement, but also develops awareness of self, others and environment due to the social nature of musical participation in general and of the rhythmics class in particular.

KEYWORDS

Dalcroze Eurhythmics
music
movement
touch
contact
improvisation

1. This is a poetic reflection by one of the authors on his first experience of Dalcroze Eurhythmics. The other person referred to is another student.

VIGNETTE 1. THE TEACHER

I am seated at the piano at one end of a dance studio. I look at the group of students filling the space. They are dressed for a movement class. The fingers of my left hand trail over the piano keys, cool, black and white. They choose a low G. Quietly, slowly and smoothly they trace a line that rises up to the D, then G above. As they do so the group starts to move into the space, gathering speed as my phrase passes into my right hand, gaining momentum and intensity. The left hand joins the right and as music spreads out over the whole keyboard, the class spreads out in the room. Responding to my sound the students start to travel with the triplets I am now playing, each student moving in a unique and personal way: we are all 'tripletting' together. They look as if they are flying. As I shape my music towards a cadence they start to look for a partner. As I bring my music to rest they draw together and touch hands. I withdraw my fingers from the keys. Silence. They laugh.

VIGNETTE 2. THE STUDENT¹

Hand on hand

I am being led, my eyes are closed.
We do not hold hands but my hand rests firmly on hers.
We run and glide, dip and turn.
(This is the nearest I've ever been to feeling what a bird must feel.)

The choir intones and the saxophone spins out its line.
Other sensations quickly fade.
My whole being is concentrated in that single point of contact: hand on hand.
I want nothing; all is trust and movement.

I am aware of the space of the entire room,
Right up to the corners beyond my reach.
It seems as if this point of contact – the ever-renewing beginning point of the phrase – can travel anywhere.

As we turn I feel the sun on my face.
As we soar forward my mouth drops open.
I am overcome with exhilaration and gratitude.

All is trust and movement.

(Habron 2009: 6–7)

These two vignettes offer glimpses into some of the relationships between touch and improvisation in the experiences of teacher and student in the context of Dalcroze Eurhythmics. In the first, piano improvisation is the means of sound production, in the second recorded music is used. In both instances, the students make contact and improvise in movement within certain constraints. We refer to these vignettes below.

INTRODUCTION

The purpose of this article is to describe and theorize the presence and use of touch and improvisation within the current practice of Dalcroze Eurhythmics.² In so doing, we intend to bring Dalcroze Eurhythmics within the fold where research into dance and research into somatic practices overlap, and to consider the many and diverse ways in which both touch and improvisation facilitate pedagogical and personal change in the Dalcroze work. This conceptual article draws on the literatures relating to Dalcroze Eurhythmics, somatic practices, dance, music psychology, phenomenology, and improvisation in music and dance, as well as the authors' experiences as teacher and student. In order to frame the discussion of Dalcroze Eurhythmics as a somatic practice, we devote some time to the background of the method and its relationship to dance.³

Historical background

The origins of somatic enquiry lie, according to Eddy (2009), in a change in our relationships with our bodies, which was carried forward on a wave of new ideas in philosophy, psychology, medicine, education, dance and music during the late nineteenth century. Among the pioneers in somatics, Mangione (1993) lists Jaques-Dalcroze (1865–1950) alongside Delsartes (1811–1871), Laban (1879–1958), Duncan (1878–1927) and Wigman (1886–1973). Émile Jaques-Dalcroze – pianist, improviser, conductor, composer, theatre director, pedagogue and educational reformer – considered that music, when studied through his method, had the power to make the body perfectly expressive and that ultimately a new and silent art of movement, independent of music would come into being (Goeller 2005; Greenhead 2009; Jaques-Dalcroze 1912: 145).⁴ For Jaques-Dalcroze, music was not only the goal of study; it was also the means to discovery, of developing skilfulness and of personal transformation. DE has been very influential on the development of pedagogy and therapy during the twentieth century, especially in the field of music.

Jaques-Dalcroze based the development of his method on his observation that the body was inclined to respond to music by moving. Initially, the movement entrained by music was observed to be 'everyday' movements, such as swaying and tapping, but this soon developed into an understanding of the intrinsic links between movement and music and the origins of music in the body itself (Bowman 2004, Stublely 1998). In this he anticipated by quite some margin the view of Rabinowitch et al. that the nature of musical participation is 'profoundly kinaesthetic' (2012: 113) and of Bowman and Powell that it is 'foundationally a corporeal event' (2007: 1101) just as his understanding of its essentially social nature anticipated Blacking (1973), Malloch and Trevarthen (2009), Small (1998) and Trevarthen (1999–2000). DE is associated with a number of different fields: health, well-being and music therapy (Frego 1995, 2009; Habron 2014; Kressig et al. 2005; Trombetti et al. 2010), music and music education (Juntunen and Westerlund 2001; Juntunen 2002, 2004; Mathieu 2010; Seitz 2005), theatre (Callery 2001; Evans 2006; Lee 2003; Murray and Keefe 2007) and dance (Garafola 2005; Jordan 2000; Odom 1998, 2006, 2007).⁵

Jaques-Dalcroze thought that his work should evolve flexibly, and enjoined teachers to invent their own exercises based on the principles of the method rather than simply to imitate him (Berchtold 2005). DE began as an innovative framework for relating in a variety of contexts: 'a seedbed of new ideas about how to move and to make music with the original instrument, the human

2. The name Dalcroze Eurhythmics is still used to distinguish it from other practices, such as Rudolf Steiner's Eurythmy. Dalcroze Eurhythmics was originally conceived as, and still is, primarily a music education, but has a wide range of applications. The appellation 'rhythmics' is also used in continental Europe as a catch-all for various kinds of rhythmic education which may be more or less close to the Dalcroze practice. We refer to Dalcroze Eurhythmics as defined in Le Collège de L'Institut Jaques-Dalcroze (2011) and as practiced in the United Kingdom.
3. Dalcroze Eurhythmics is often shortened to Dalcroze, and we use this convention, or DE, from here onwards. When referring to Émile Jaques-Dalcroze we use his full surname, to avoid confusion.
4. While Dalcroze himself always spoke of his 'Method' others have preferred to use the word 'approach' owing to its flexibility (Bachmann 1991; Juntunen and Westerlund 2001). Since there are quite clear principles and practices used in teaching DE, it may be more accurate to say that it is both a method and an approach.
5. For the most recent overviews of Dalcroze-related research see Habron (2013) and Mathieu (2013).

6. In the United Kingdom sustained study of DE can be found at the Royal College of Music 1960s–1980s; Trinity College of Music (now TrinityLaban) 1984–; Royal Northern College of Music 1991–; Royal Ballet School, at various times throughout the twentieth century; Central School of Ballet 1990s– and in recent years, Birmingham Conservatoire, there have been workshops at Guildhall School of Music and Drama since 2006; in 2013, Elmhurst School for Dance appointed a regular teacher.
7. Although the idea of silent *Plastique* without music can be found in writings as early as 1912 (Jaques-Dalcroze 1912/1967: 145), the term *Plastique Animée* generally refers to the realization of a piece of musical repertoire in movement. To effect such a realization students bring all they have learnt from the studies of Eurhythmics (Greenhead 2009; Mathieu in press; Urista 2003). These choreographies can be seen as living analyses of music in real time. Other forms of *plastique* include creating different relationships with the music such as contrast or dialogue.

body’ (Odom 1998: 594). The exercises developed by successive generations of Dalcroze practitioners have been used in training dancers, actors and musicians in conservatoires and dance schools internationally throughout the twentieth century to the present day.⁶

DE is grounded in three interrelated disciplines that inform one another (Greenhead et al. 2007; *Le Collège de L’Institut Jaques-Dalcroze* 2011):

- Rhythmics studies time–space energy relationships common to movement and music by means of exercises using improvisation and intense listening;
- Aural Training (*solfège*) uses movement and improvisation to assist in aural development and understanding, and
- Improvisation of all kinds: vocal, instrumental and in movement.

Each discipline supports the others in multimodal and polyvalent exercises designed to prepare the creative artist. Central to the achievement of this goal is the teacher’s musical improvisation, usually at the piano, which mediates the linking of the senses, body, emotions, intellect and inner world of the student with the outer world and environment, including other people. DE has its own theories, principles and practices (*Le Collège de L’Institut Jaques-Dalcroze* 2011). Its summation can be found in *Plastique Animée*, where students apply what they have learnt to the study of musical repertoire and to the creation of original performance work.⁷ While originally designed to develop a wide range of knowledge and abilities necessary to musicians (Berchtold 2005; Greenhead 2009; Mathieu 2013, in press), DE also has many other applications.

DE AND DANCE

During the first decade of the twentieth century’ Jaques-Dalcroze recognized the dance innovations of his contemporaries Loie Fuller, Isadora Duncan, and Grete Wiesenthal and her sisters’ (Odom 1998: 595). In turn, many students and faculty at the *Bildungsanstalt Jaques-Dalcroze*, Hellerau, Germany became prominent in the world of dance. Among them were Suzanne Perrotet, Marie Rambert, Mary Wigman, Valeria Kratina, Elsa Findlay, Michio Ito, and Beryl de Zoete (Odom 1998). Indeed, professional Dalcroze training includes additional classes in movement or dance. These have varied from the Duncan-inspired classes taught at Hellerau by Mary Wigman and Annie Beck, 1910–1914, to the classes found on various training courses today that may include contemporary dance, Laban, folk and historical dance as well as the somatically inspired approaches of Gerda Alexander (Eutony), Feldenkrais and Contact Improvisation.

Histories of the development of somatics in dance (Batson 2009; Eddy 2009) suggest a movement away from gymnastics, motor action and rhythmic or expression-interpretation as taught variously by Delsartes, Jaques-Dalcroze, or Mensendieck towards an emphasis on sensory awareness (Batson 2009: 2). A number of methods such as Ideokinesis, Feldenkrais, Alexander, Eutony and other techniques evolved over the twentieth century. They generally involve relaxation and slow movement in order to gain awareness of ‘the self that moves’ (Eddy 2009: 6), the body experienced and regulated from within, imagined movement and the use of skilled touch. During the course of their development, somatic practices retained strong links with dance, while those with music itself, including DE, dropped away. However, it is quite possible, and even fruitful, to consider DE and somatic practices in relation to one another and it is to their relationship that we turn next.

DE AS SOMATIC PRACTICE

While Dalcroze has been discussed relatively extensively within the field of dance, especially dance history (Garafola 2005; Odom 1998, 2006, 2007), the same cannot be said of the field of somatics. In an initial study, Greenhead and Habron (2013) noted that Dalcroze relates particularly closely to Somatic Movement Education as described by Beaudoin (1999), Eddy (2009: 7–8) and Williamson (2010). Beaudoin (1999) identifies six elements in somatic learning, which we can consider from a Dalcrozian perspective:

- Doing movement
- Modifying posture
- Coming back to sensation (i.e. away from cognitive reflection)
- Being attentive
- Letting (themselves) go
- Developing a quality of presence. (Beaudoin 1999: 77)

Doing movement

Primarily, DE is about moving, but this movement, even when silent, is related in various ways to music and entrained by it.

Modifying posture

If, following Feldenkrais (1972), Franklin (1996) and Sweigard (1974), body positions are thought to be dynamic, it is clear that Dalcroze lessons involve this element in several ways. First, body position is almost always related to whole body movement (stasis or stillness is also actively present as a living moment, a cadence, a point of arrival or departure); second, exercises in association and dissociation are designed to help learners improve their bodily coordination and articulation; third, lessons include work on the most efficient ways to travel through space, change levels, work in contact with others, and use objects, the teacher setting up exercises so that these things can be discovered;⁸ fourth, certain types of listening exercise invite changes in body position according to what given sounds feel like to the student personally as in responding to the quality of intervals and chords and to harmonic changes (Greenhead 2013b; Juntunen and Hyvönen 2004; Parker 2013).

Coming back to sensation

The principle that pre-reflective experience or know-how should precede cognitive reflection was fundamental for Jaques-Dalcroze. He wrote, 'The whole method is based on the principle that theory should *follow* practice' (1914/1967: 63, original emphasis).⁹ In 1925, when he made the oft-quoted statement 'The object of education is to enable pupils to say at the end of their studies, not "I know", but "I experience"' (1930: 58), it is clear that, in his view, knowledge is attained *through* experience and cannot be separated from it. Students in a Dalcroze class are invited to enter the world of sensation. In commenting on Jaques-Dalcroze's well-known aphorism to 'let your body become music', Dominique Porte, one-time Director of the Institut Jaques-Dalcroze, Geneva, observes that in the Dalcroze method, the movement of the body, is so united with music as to become an incarnation of the music itself (Porte n.d.: 1). Kinaesthetic experience in DE provides the student not only

8. See Vignettes 1 and 2.
9. Jaques-Dalcroze's writings were gathered together in several publications during his lifetime; when two dates appear, the first is the date of the essay, the second is the date of the anthology in which it was published.

with an internalized sensation of motion that can be drawn on to improve fluency in future performance (Magill 2007: 206) but also an understanding of the movement and intention of others through kinaesthetic empathy (Reynolds 2012; Bolens 2012). Furthermore, it provides material for Schön's two modes of reflection: reflection-in-action and reflection-on-action (Finlay 2008; Schön 1983, 1987). For this implicit knowing to take place and to become conscious, the world of sensation must be engaged with, embraced and trusted.

Being attentive

Having drawn the learners' attention to the body, sensory perception and the environment, the teacher encourages them to enact or reveal their experience of music, their feelings about it and their understanding through bodily movement (Vignette 2) and as a result is able to perceive the state of attentiveness and responsiveness of the class directly. As exemplified in Vignette 1, the teacher can solicit attention through musical improvisation and see the result in movement. This non-discursive, non-verbal communication is part of the essence of DE. Furthermore, a different way of building attentiveness is offered in the form of quick-response exercises (Jaques-Dalcroze 1914/1967: 65–79, 1925/1930: 53) that are designed to tune up the nervous system and the capacity to respond flexibly in the moment.

Letting (themselves) go

Letting go can be seen as being able to free oneself from the need to control events and outcomes, and arrive at 'beginner's mind' (Suzuki 1970). Emptiness, or opening oneself to experience and whatever may occur in the moment, is an important aspect of improvisation in both music and dance. As an identifying principle of DE, improvisation is present in many different ways: in movement, vocally, and using body percussion or instruments. In the rhythmic class it is also the most important means of communication between the teacher and the students. It is through improvised music that the teacher can solicit, invite, inspire, suggest, correct, convey new information and carry the class through a range of musical experiences. Through their response to this in improvised movement, students can develop an array of capabilities such as spatial awareness, rhythmic understanding and security, aural acuity, flexibility, memory. Their experience helps students to learn how to use music to inspire movement in others and forms part of a 'library' of experiences, knowledge and skill to be drawn on when playing for the rhythmic class. The experienced teacher also 'lets go' and enters the realm and adventure of possibility. The teacher in Vignette 1 observes that when making improvised musical proposals to the class and in turn responding to their movement, her playing moves in and out of conscious control in dialogue with the group.

Developing a quality of presence

The pre-reflectivity of the primary response to music allows it to be used to tune the nervous system in quick-response exercises. Beyond developing aural acuity, speed of psycho-physical response, self-mastery, and flexibility of mind and body, the combination of improvisation and quick-response exercises elicits a quality of responsiveness and presence: a readiness to act or inhibit action, or to dose energy according to expressive and technical need, putting

participants in the here-and-now (Spillman 2005). According to Bowman, sonorous experience is corporeal and linked to muscle movement and action: 'to hear is to participate, to be corporeally involved, engaged, positioned' (2004: 38; Bowman and Powell 2007: 9).

The very nature of the Dalcroze class enables students to move from an inner focus on how they are experiencing music, through dilation of the body (Barba and Savarese 1991) to a clear projection of intentions into the wider space and to others (Goodridge 1999; Rodenburg 2009). This response in which learners are simultaneously present to themselves, the music, the space and others is seen particularly in *Plastique Animée*-type exercises (Meerkat Films 2014). It is this integrated experience 'in the moment' that may be one of the reasons why learners sometimes report 'flow' experiences in DE (Csikszentmihalyi and Custodero 2002; Custodero 2005; Habron et al. 2012), which in turn are often associated with joy. Joy has been called the most characteristic Dalcrozian quality (Bachmann 1991). Jaques-Dalcroze wrote: 'I like joy, for it is life. I preach joy, for it alone gives the power of creating useful and lasting work' (1909/1917: 32) and that, in the rhythmic class, the child will 'conceive a profound joy of an elevated character, a new factor in ethical progress, a new stimulus to will power' (1915/1967: 98). Enjoyment is a key factor in somatic learning (Williamson 2010) and learning in general (Csikszentmihalyi 1990). It has been consistently reported by participants in Dalcroze classes through qualitative studies of professional adult learners (Habron et al. 2012; Mathieu 2012; Van Der Merwe 2014) and older adults (Mathieu 2012), as well as observed in studies of children with special educational needs (Habron-James 2012, 2013).¹⁰ Our two vignettes touch on this element and the pleasure and confidence that arises from the sense of 'rightness' in action (Alperson 2012).

Thus, all six of Beaudoin's elements are present in the practice of DE. In concluding her article, she affirms that 'participants who reached higher levels of integration transformed the original somatic learning into *their ways* of doing things and developed a different attitude toward themselves and their everyday problems' (1999: 79, original emphasis). This personalness is also central to Dalcroze (Bachmann 1991: 23) and contrasts with certain perceptions of the method as being dogmatic, as exemplified in Brandenburg (1931). For musicians, fundamental questions relating to how they play or sing are critical to their sense of themselves as musicians. Many students have reported transformations of various kinds in their personal and professional lives as a result of their Dalcroze training, and through their experience of it have improved musical performance (Greenhead 2013a; Mathieu 2013, in press; Mayo 2005; Spillman 2005), found musical understanding easier (Van Der Merwe 2014) and noted beneficial impacts on their composition (Habron et al. 2012; Habron 2013) and on their conducting (Bowtell 2012). Several quantitative studies also show the effectiveness of DE on students' motor performance (Brown et al. 1981; Zachopoulou et al. 2003), rhythmic ability (Wang 2008), and melodic discrimination (Crumpler 1982).

An example

In order to give a concrete example of the relationship between Dalcroze and somatics, we can map some elements of Somatic Movement and Dance Education (Williamson 2010) onto an account of 'In music body and soul', a Dalcroze research project conducted at Laval University, Québec (Mathieu in press). We have numbered these elements for ease of reference.

10. Examples of all these manifestations of the Dalcroze work can be found in a series of DVDs produced by Meerkat Films (2005, 2007, 2011a, 2011b).

- 11. See elements: 3, 4, 6, 7, 9, 10, 11, 12.
- 12. See element: 10.
- 13. See elements: 1, 2, 3, 4, 6.

Williamson (2010: 44) identifies eight themes that shape somatic movement and dance pedagogies:

1. Self-regulation through conscious awareness and embodied action
2. Hedonic behaviours. Pleasurable and life enhancing activities
3. Self-authority: 'active and intelligent engagement' in shaping one's life
4. Revalidation of subjective experience: the body as 'the matrix for our ideas, values, emotions'
5. Inspired body: a living, breathing experience of anatomy
6. Revalidation of sensual experience
7. Play and creative improvisation
8. Slow time and contemplation

Additional themes include:

9. Sensing the material environment...as a source of wisdom and knowledge
10. Visualization and embodiment of thoughts and feelings expressed directly or symbolically
11. Rhythm, sound, vibration and motion as a way of engaging with the universe
12. The moving body as a way of tuning in to the 'dance of life'.

In her project, Dalcroze specialist Louise Mathieu invited students to explore diverse pieces of music through movement, voice and instrumental improvisation and to analyse their movement, the use of space and the musical score before deciding how to realize chosen pieces in movement (Mathieu in press).¹¹ The students' post-performance comments testify to their enjoyment of the adventure of the whole process and echo many of Williamson's statements concerning the nature of somatic practice (2010: 43–44, 46). They considered improvisation essential to the exploration and interpretation of the chosen pieces as it developed acute listening and hearing and the capacity to attend in the present moment, to grasp the energy and impulses of the music, to be spontaneous, to give free rein to feeling and emotion and to investigate and reveal the music in a creative way.¹² On the personal level, the engagement of the body as locus of experience and expression, fostered self-knowledge as they learnt, in the words of one respondent

to listen to my body ... to trust my instincts...to be receptive, spontaneous, authentic ... to accept my strengths and limitations...to accept the gaze of another upon myself ... to know myself and understand the importance of knowing oneself well if one is to interact serenely with others ... a sense of personal liberty.

(Mathieu in press: n.p.)¹³

Having dwelt mainly on aspects of the relationship of sound with movement rather than touch, it is to what we have called 'the touch of sound' and to the notion of contact, both concrete and communicative, that we now turn.

CONTACT AND TOUCH

As illustrated in the two vignettes, direct bodily contact may take place as a way of travelling together or enacting a mutually sensed feeling of arrival: 'the adventure of "meeting in movement"', as well as connection to the self, others and 'the space in between' (Kaltenbrunner 1998: 11). Such encounters are part

of the essence of DE in which contact of various kinds, and in particular touch, is used in many ways. Notions of touch and contact are critically important in music-making generally. For example, 'she has a nice touch' is a comment that may be made about a pianist whose performance has moved us. In terms of the movement–music relationship, the Latin root of the word 'contact' (con [together]+tangere [touch]) conjures up a range of ideas and possibilities

- Just as to 'to move' may indicate displacement in space or to affect emotionally, 'to touch' may mean to reach another emotionally or the physical act of touching.
- The English 'touch' comes from the French 'toucher' where it is used for 'to play an instrument' as well as 'to touch' physically or emotionally.
- Tactus (from tangere) is the name given to the mediaeval choral director's method of keeping time with a finger gesture (Blachley 2000: 517).
- 'Tact' refers to 'adroitness' in managing the feelings of others or 'fine perception in seeing and doing exactly what is best in the circumstances' (*The Chambers Dictionaries* 2006) and is therefore related to responsiveness, to touching and being touched by others, not physically but through sensitive behaviour.

In DE the use of touch can be found in many kinds of exercise in which participants communicate intentions and feelings to others and receive their responses. The following table gives some examples of these.

Type of touch	Context	Who	What/how	Observations
1. Direct physical contact with others	Leading and following exercises Communicating a pulse or impulse to another Arriving at a conclusion or cadence point together Pair-/group-work holding hands or using partnering methods common to traditional dances, linked arms etc. Pair-work other parts of the body	Student–student	All parts of the body Skipping, trotting, jumping together; folk/traditional dances Giving and receiving weight to learn to sustain movement and intensity	Often done using materials, exercises of this kind are used to develop communicative and social skills, to clarify and understand ideas, feelings and intentions and to give instant feedback
2. Massage and therapeutic touch	To become bodily aware; to release tension; to take care of one another	Students; teacher–student	Teachers trained on full-time courses receive classes in Eutony, Feldenkrais or Alexander Technique and may use these techniques to help the class become more aware and more open.	Not a course requirement in all trainings although very often used

3. Self-touch: body percussion	Accompanying rhythmic games and songs; expressive creative work, solo and ensemble	Students	Clicks, patsching, stamping, brushing	Precision in timing and rhythm; ensemble skills
4. Touching (playing) simple percussion instruments (such as drums, claves, rattles)	Improvising to accompany or inspire movement; accompanying movement games and songs; manipulation of sound-making objects; marking rhythmic or metric patterns	Teacher-instruments; students-instruments	Players can move at the same time as playing these instruments; little instrumental technique or formal musical knowledge is required	Touch, timbre, rhythm, emphasis, dynamics, texture and articulation invite different movement responses
5. Touching (playing) the piano or another instrument	Improvising for movement; improvising in aural training and improvisation classes; accompaniment	Teacher and students		The range of the piano provides a vast palette of colour and sound that can be employed in improvisation or in playing repertoire to inspire movement
6. Touching and manipulating materials: balls of various sizes and weights, beanbags, hoops, ropes, canes, elastics, scarves and pieces of fabric; paper, crayons, paints; stones, feathers (objets trouvés with a visual, tactile or sound-producing quality)	To accompany or inspire: rhythmic games and exercises; expressive and creative work in sound and movement; for instant feedback; to develop eye-hand coordination; to rehearse intentions and explore musical interpretation (e.g. in Dynamic Rehearsal ¹⁴), to provide opportunities to modify movement for a better result	Teachers and students	As body extensions; to project movement into space; to enable the student to experience different movement qualities and rhythms; to stimulate the imagination; to develop precision and timing in movement; to facilitate pair- and group-work	
7. Touching another with, through, or being connected via, an object	Feeling the presence and intentions of the other through the object and adapting; leading and following exercises	Student-student(s) by means of a stick, elastic, ball, hoop, rope	Exploring connectedness through an object awakens the senses and the ability to focus in new ways; engenders cooperation	Useful when there are barriers to direct contact owing to cultural and gender issues or in the case of those who have experienced physical abuse

Table 1: Some uses of touch in DE.¹⁵

As a concrete example of ways in which these different uses of touch connect one to another in the application of DE to instrumental teaching, we will take the singing tone, so hard to teach (Kochevitsky 1967: 6) and so prized in instrumental playing. The singing tone depends on the ability to sustain a sense of continuous movement, which requires muscular resistance (Jaques-Dalcroze 1930: 62–93). Dalcroze classes offer simple ways of addressing this challenge, particularly if materials are used, and teachers often use exercises for adults and children requiring body contact, passing, pulling, pushing, or carrying objects alone, in pairs or groups or imagining doing so. The following examples show music, movement, touch and materials in work for students of different ages and stages.

Children stand in a circle holding on to a single, large loop of elastic. Each in turn takes four beats of the music to change the shape of the elastic by pushing or pulling it carefully. The purpose of this exercise is to learn timing, the sense of duration, sustained smooth movement and taking turns.

In pairs. A recording of Monk's 'Northern Lights' from *'Facing North'* opens with long, sustained sounds of unpredictable length. The first leader leans into the partner who resists sufficiently to allow both to effect a very slow, sustained change of position and who takes the initiative at the onset of the next sound with a directive push of her own. They take it in turns to give and receive, sharing and embodying through improvised movement their experience not only of the changing durations, but also the changes of intensity, dynamics and tonal qualities in the music.

In pairs. A bamboo cane is supported between the partners through the pressure of an index finger on either end of the cane. Each must feel the presence of the other through the cane to travel together and change position, speed and leader with every musical phrase without dropping the cane. This exercise requires rapid adjustment to changes of pressure and stimulates and sensitizes the fingers, while demanding integration of the whole body, locates the sense of duration and changes of intensity in the hand and fingers.

In pairs. One leads the other follows. The teacher plays Bartók's 'Old Hungarian Tune' from *For Children Vol. 1*. The leader guides the partner, giving a stimulus at the beginning of each phrase. This touch conveys the point in the body where the phrase is to begin, its quality, dynamic and direction. Without touching the partner continuously the leader stays with them, shaping the music on them and touching them again when necessary to shape the middle and end of the phrases. They discuss their intentions and experiences and change roles when the piece is repeated.

A large group. In front of them a single student interprets the music played, indicating by gesture alone how and where the group (or groups) is to move in the room. This traditional Dalcroze exercise of 'group conducting' uses contact without touch.

Contact without touch can also be found in mirror exercises of various kinds used in Dalcroze classes. Mirror exercises draw participants into a kinaesthetic empathy through the activation of mirror neurons (Gallese et al. 1996; Gallese

14. Dynamic Rehearsal, an application of Dalcroze principles and practices to the rehearsal and performance of musical repertoire developed by Karin Greenhead since 1991 (Mathieu 2013; Mayo 2005). In this context, Spillman (2005) observed other performance benefits when rehearsing her violin repertoire in movement using materials. She states that they helped her to feel present and to address an audience without anxiety.
15. It must be noted that there is no specific hierarchy of touch in DE, as can be found in some other somatic practices.

16. Sound itself travels through air at 330 metres per second but through body tissue at 1540 owing to the large quantity of water present.

2008a, 2008b; Rizzolati and Sinigaglia 2008) and may be multi-sensory, inviting responses in one or more modes: a gesture may be mirrored, or echoed, in sound, for example. According to Merleau-Ponty, both sound and colour are received into and vibrate in the body (1962: 227, 235) while Gibson and Noë assert that movement lends to vision itself a touch-like, or haptic, quality (Gibson 1950, 1966, 1979; Noë 2006: 97).

This same, haptic quality has been identified in sound. Sound waves travel through air and matter; they touch and penetrate body tissue through to the bone,¹⁶ setting it in motion and inviting a largely instinctive and pre-reflective response (Bowman 2004; Clarke 2005; DeNora 2000; Ihde 2007; Nancy 2007; Powell 2004), even in cases of hearing impairment (Glennie 2005). Speaking of live music, Oskamp (2006) identifies the qualitative difference of the sensation of sound in the body when the source is acoustic. She quotes Daniela Graca 'My body is acoustic...I feel easier with acoustic music. I experience it as physically closer' (Oskamp 2006: 40) and Eileen Standley 'Acoustic music moves differently through space and reaches your body differently. The attack of a snare drum has a different affect on my body than electronic music' (Oskamp 2006: 40–41).

Tone quality or timbre is, in Shepherd's words, 'the core of all sonic events...the very vibratory essence that puts the world of sound in motion and reminds us...that we are alive, sentient and experiencing' (1987: 158). The themes that emerge in Holmes' (2011) study of the functions of timbre in performance include its ability to convey imagery, colour, humour, intentions; to parallel speech and language; to orchestrate; to persuade and surprise and to convey the sense of gesture, tension and release. Her subject, Gary Ryan, describes imagining stroking a cat when wanting to elicit warm sounds from the guitar and a 'claw-like' gesture to create a thin tone. Here, intention, imagination, gesture, and sound unite and are projected into space in one, trans- or metacorporeal, sonic and somatic event. Timbre, argues Holmes, may be 'the most salient variable performance parameter' (2011: 1). In an earlier study of improvisation in music and dance Mathieu, describes the musician's sound as seeming to 'activate' the dancer (1984: 109), lending support to Driver's observation that: 'Tone is a dynamic element and a strong emotional stimulus. It has an almost galvanic effect on movement' (Driver 1936: 30).

Timbre therefore is also involved in the commonly accepted human response to musical pulse, tempo and rhythm pattern, phrase and groove. DeNora (2000: 161) uses the term 'latching' to describe engagement with music's properties while Bowman asserts that 'the entire range of musical action is grounded in the body' (2004: 38). Musical cognition is not about generating metaphors or representations of feeling that make us want to dance nor does it *express* them; rather, it *has* these qualities (Bowman 2004). Music's audible motion and bodily motion are constitutive of one another (Phillips-Silver 2009). By music we are 'ensounded' and, through a 'sort of transformation' (Jaques-Dalcroze 1909:69), 'translation or transposition' (Jaques-Dalcroze 1942:124) of the perceived sound into movement 'become music' by participation (Mathieu in press; Porte n.d.: 1), methodically uniting 'elements of different ontological type...in a single instance' (Bigger 1968: 7). As T. S. Eliot put it, 'You are the music while the music lasts' (1963: 213). Clarke (2005) asserts that the ability to experience musical events as bodily motion depends on our having experienced such actions and motions elsewhere. The Dalcroze teacher keys into this prior knowledge when, for example, introducing the notion of tempo, fast and slow to children and commonly asks 'Have you ever seen anything that goes fast? Show me how it goes? Do you ever go fast yourself? When?

Can you show me?’ before showing that the music can also go fast or slow and inviting the children to adjust their tempo to that of music played. The experienced students in Vignette 1 immediately tune into the music’s movement, and, music, teacher and students ‘triplet’ and change speed together.

Through musical improvisation, then, a Dalcroze practitioner touches others physically and looks for a response in sound or movement. This response may be an echo of the message conveyed or some other improvised or planned response. Pressing states that Jaques-Dalcroze set ‘a spectrum of improvisational problems or constraints’ (1988: 143) and Doerschuk writes: ‘The art of improvisation [in DE] rests on...a developed awareness of one’s expressive individuality. This knowledge grows through interactive exercises with a teacher whose function is not to present models for imitation, but to pose problems intended to provoke personal responses’ (1984: 52). The use of constraints can be found in other somatic practices, such as Feldenkrais. Their addition ‘both simplifies the motor control task and highlights specific aspects of dynamics...constraints inhibit habitual action and free up unused degrees of freedoms’ (Goldfarb 1993: 10). Even within improvisation in dance, ‘freedom, new discoveries and distinct statements often come about within a structure or “*score*”’ (Kaltenbrunner 1998: 153, original emphasis).

For Jaques-Dalcroze, improvised music and movement considered as music are language-like (1932). They can be ‘spoken’ in the same free-flowing and improvisational way as verbal language can: ‘Indeed, music is a language and all language should be capable of revealing thought in all its shades at the right moment...in all its freshness’ (Jaques-Dalcroze 1932: 375). The teacher ‘converses’ with the students as a group and individually through music (Vanderspar 1984: 8, 41) in ways that can be instantly altered according to the response to the first improvised proposal.

For an understanding of how an expert Dalcroze teacher guides students into a variety of experiences by nuancing content, quality, style, expression and interpretation, we might look to the haptic nature of sound itself and its use in improvisation. The practice of DE may offer a useful lens through which to view improvisation in movement and music as an effective pedagogical tool, especially when combined with a dialogical, intersubjective teaching approach.

SUMMARY

Our intention in this article was to show how DE can be linked both historically and in contemporary practice to somatic practices. We have shown how DE is a somatic practice at the core of which lies music, movement and improvisation, and a certain kind of relationship between the practitioner and the class. In particular we have explored aspects of touch and improvisation and illustrated some of the ways they can be found in DE, especially in the rhythmic class. We have added live, musical improvisation to the ways in which contact can be made, owing to the haptic nature of sound itself. Through the immediacy of the touch of improvised music, DE offers occasions for the tuning up the body-mind, and the tuning together of feeling, thinking and doing. In order to convey vividly something of what happens in a Dalcroze class we have drawn on our own experiences as practitioner and student.

One key to the effectiveness of DE and the breadth of its applications may be found in the actual and material similarities between musical and bodily movement (Bowman 2004) and its spatial dimension (Clarke 2005);

another in the way playing and singing resonate sympathetically and in a touch-like way in the bodies of those present. Indeed, the touch-like nature of sound, as revealed in DE, may have a new contribution to make to the field of somatic practices. A third, we suggest, may be found in the relationship between musical and movement improvisation that lies at the core of DE; a relationship that facilitates a journey of discovery of both self-in-the-world and the other, effected by means of a dialogue mediated by the touch of music.

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